

Work Order ID 60609

Thursday, July 15, 2010 10:24:34 AM

Page 1

Item ID: D206-642-541

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 7/15/2010 Start Qty: 1.00

Required Date: 7/22/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: 10-7-15 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DC

DOCUMENT CONTROL

Document Control

Memo

0.00

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

DP 10-7-20

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

M 10/7/20

3- weld fwd cap as per dwg D3274 and OSI004

AR Aluminum Rod Batch:

M112307/M114242 BE 10/07/20

4- grind fwd cap weld on top surface only

BE 10/07/20

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8025A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

M 10/7/21

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				1	11	10/7/21	
130 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							8/10/21
140 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							8/10/21

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Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150



Skidtubes

Skidtubes

Skidtubes

Memo

1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ M115114 ☐Sikaflex expire date: ☐ 11-1-30 ☐Start: ☐ 10-7-21 ☐ Time: ☐ 4 PM ☐Finish: ☐ 10/2/22 ☐ Time: ☐ 8:30 AM

(Adhere for 12 hours)

0.00

0.00

0.00

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

S. Collier

Handwritten signature and date: 10-7-21

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170 	Skidtubes	0.00							
Skidtubes	Memo 1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position. 2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297" . Deburr 3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES 4- Countersink crossbolt spacer holes as per Dwg D3274 5- prepare for welding	0.00							
180 	QC	0.00							
Quality Control	Memo QC5- Inspect part completeness to step on W/O	0.00							

M 10/7/26

h2 3.06
L° z 4.9°

S 10/2/26

(70)

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R ☐ Aluminum Rod ☒ *M112507*

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

BE 10/07/28
10-7-28
70

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210  QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00				<u>10</u>			
220  HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch	0.00 0.00				<u>1</u>	<u>Ø</u>		
230  Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: 11:00 OVEN TEMPERATURE: 320° FINISH TIME: 11:30	0.00 0.00				<u>1</u>	<u>BR 10-8-11</u>		

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00	= 7 ml 10/08/24			1	0		
250 HandFinish Hand Finishing	HandFinishing Memo 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/R <input type="checkbox"/> N/A <input type="checkbox"/> LPS-3 <input type="checkbox"/> M109956 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> M115104 Sikaflex expire date: <input type="checkbox"/> 11/09	0.00 0.00	= 7 ml 10/08/24			1	0		
260 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo Inspect Nut Plate & Inserts	0.00 0.00	ml 10 08 24 (1)						

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

270

0.00



HandFinish

Hand Finishing

HAND FINISHING RESOURCE #1

Memo

0.00

7/15/10 10/08/251

xl 0

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ 11/15/04

Sikaflex expire date: ☐ 11/04

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: 12/17

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ 11/15/04

Sikaflex expire date: ☐ 11/04

280

QC5- Inspect part completeness to step on W/O

0.00



QC

Quality Control

Memo

0.00

10 08 24 ①

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
290	Identify as per dwg & Stock Location: _____	0.00							
	Packaging								
Packaging	Memo	0.00							
	<i>PPP</i>								
	<i>60609</i>								
300	QC21- Final Inspection - Work Order Release	0.00							
	QC	0.00							
Quality Control	Memo								

*10/08/2010**10/08/27**10-8-29*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Thursday, July 15, 2010 10:24:40 AM

[illegible]

Required Date: 7/22/2010

Required Qty: 1.00

Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
IPP Rev:F 08-06-02 add comment DD verified by:EC
IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190 		Manufactured	No			110	Each	32.0000	1	1			
Extrusion Round 3" 206													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>	 10-7-20			
				LG	(47575)		32						
					(1)		32						
D3285-1 		Manufactured	No			110	Each	149.0000	1	1			
Cap													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>				
				LG			149						
					52511		74						
					52647		75						
D3282-041 		Manufactured	No			150	Each	9.0000	1	1			
Float Web (206L/407)													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>				
				LG	(59886)		9						
					(1)		9			 10-7-21			

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Picklist Print

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Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 69.0000 1 1
Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

69

58545

69

260652 x12 BE 10/07/28

D3275-1 Manufactured No 190 Each 17.0000 12 12
Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

17

53453

8

57513

9

260653 x12 BE 10/07/28

CR3212-4-03 Purchased No 250 Each 3,739.000 2 2
Cherry Rivet

Location

Loc Qty

Loc Code

ST311

3739

111359

5

112314

30

114436

1142

114450

564

114859

1998

x2 M 10/08/24

D3415-041 Manufactured No 250 Each 61.0000 1 1
Nut Plate

Location

Loc Qty

Loc Code

ST056

61

33842

61

x1 M 10/08/24

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Shop Packet Print

Page 2

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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

250

Each

540.0000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

540

112314

4

113539

60

113973

476

ALS4-1032-130

Purchased

No

250

Each

4,506.000

78

78



Insert

Location

Loc Qty

Loc Code

PKG11

4190

114723

4190

ST282

277

110511

38

114407

239

ST381

39

114654

39

D3536-15

Manufactured

No

270

Each

13.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP

6

56055

6

FP11

7

59238

7

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Shop Packet Print

Page 3

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Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-23 Manufactured No

270

Each

6.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP011

6

B60234

X1 M 10/08/20

58819

6

D3536-35 Manufactured No

270

Each

11.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP012

11

B60235

X1 M 10/08/20

58683

11

D3536-39 Manufactured No

270

Each

21.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP12

21

58215

7

X1 M 10/08/20

58571

14

D3535-15 Manufactured No

270

Each

10.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

10

59236

10

X1 M 10/08/20

D3535-35 Manufactured No

270

Each

7.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP018

7

59237

B60232

X1 M 10/08/20

Thursday, July 15, 2010 10:24:40 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 5

Thursday, July 15, 2010 10:24:40 AM

Work Order ID: 60609

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-39	Manufactured	No	270	Each	8.0000	1	1
							
Wearshoe							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP18

8

58214

8

D3535-23	Manufactured	No	270	Each	5.0000	1	1
							
Wearshoe							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP21

5

57730

5

D3537-3	Manufactured	No	270	Each	20.0000	1	1
							
Wearpad							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP17



4

57512

4

FP19

16

D3537-1	Manufactured	No	270	Each	44.0000	9	9
							
Wearpad							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP

1

55465

1

FP17

43

57713

3

59593

40

Thursday, July 15, 2010 10:24:40 AM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:24:40 AM

Page 6

Work Order ID: 60609

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332
R Purchased No

270 Each

0.0000 80 80

1115000



washer



x80 M 10/08/20

AN960C416 NAS1149C0463
R Purchased No

270 Each

113.0000 1 1



washer



Location

Loc Qty

Loc Code

ST346

113

100993

113

D3672-1 Manufactured No

270 Each

1,033.000 2 2



Phenolic Washer



x1 M 10/08/20

Location

Loc Qty

Loc Code

ST077

1033

51674

33

52505

1000

AN3C4A Purchased No

270 Each

1,559.000 80 80



BOLT



x2 M 10/08/20

Location

Loc Qty

Loc Code

ST350

1559

114103

501

114108

14

114416

12

114523

2

114859

30

114941

1000

x90 M 10/08/20

Thursday, July 15, 2010 10:24:40 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Thursday, July 15, 2010 10:24:40 AM

Work Order ID: 60609



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN4C5A
BOLT

Purchased No

270 Each

513.0000

1

1



Location

Loc Qty

Loc Code

ST346

513

110552

13

112243

500

X1 MU 10/08/24

D2646
Aft Cap

Manufactured No

270 Each

94.0000

1

1



Location

Loc Qty

Loc Code

FP-4

85

57332

85

FP6

9

52663

9

X1 MU 10/08/24

D3413-1
Ring

Manufactured No

270 Each

31.0000

1

1



Location

Loc Qty

Loc Code

ST473

31

51586

1

53446

23

58524

7

X1 MU 10/08/24

Thursday, July 15, 2010 10:24:40 AM

Shop Packet Print

Page 7

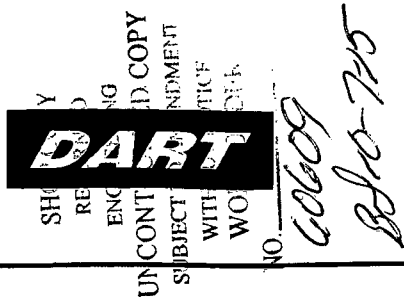
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
07.02.12
DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- ALL HOLES DRILLED ON CENTERLINES.
- BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- WELDING TO BE DONE PER DART QSI 004.
- FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

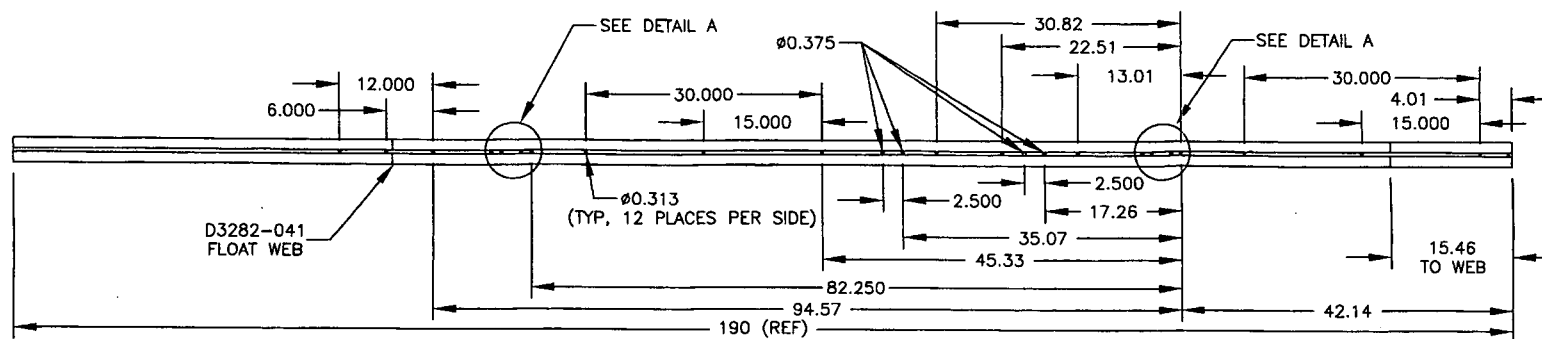
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

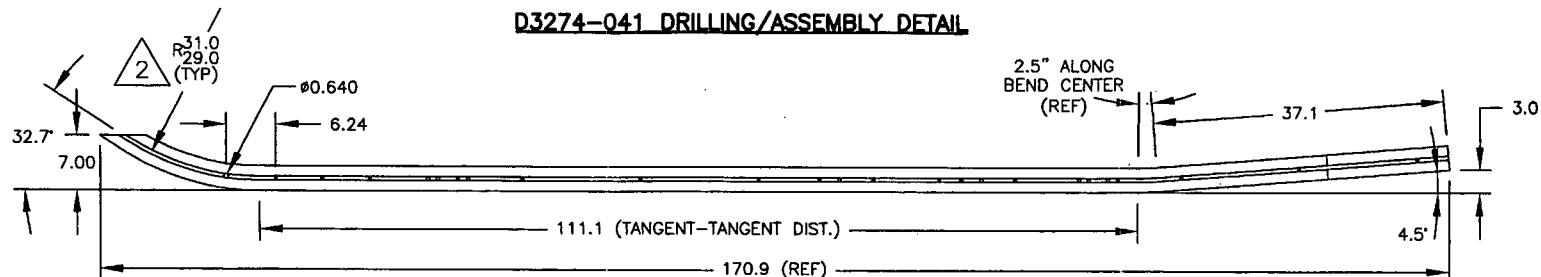
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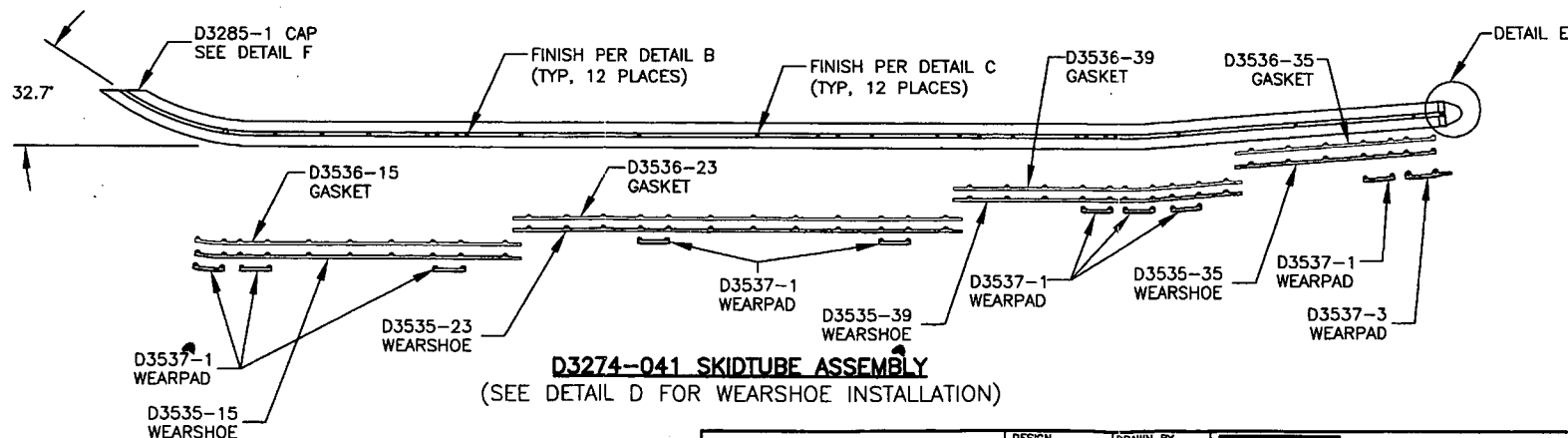
w/o 60609



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DESIGN	CP	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	D3274	REV. D
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY		SHEET 2 OF 4
					SCALE 1:15

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

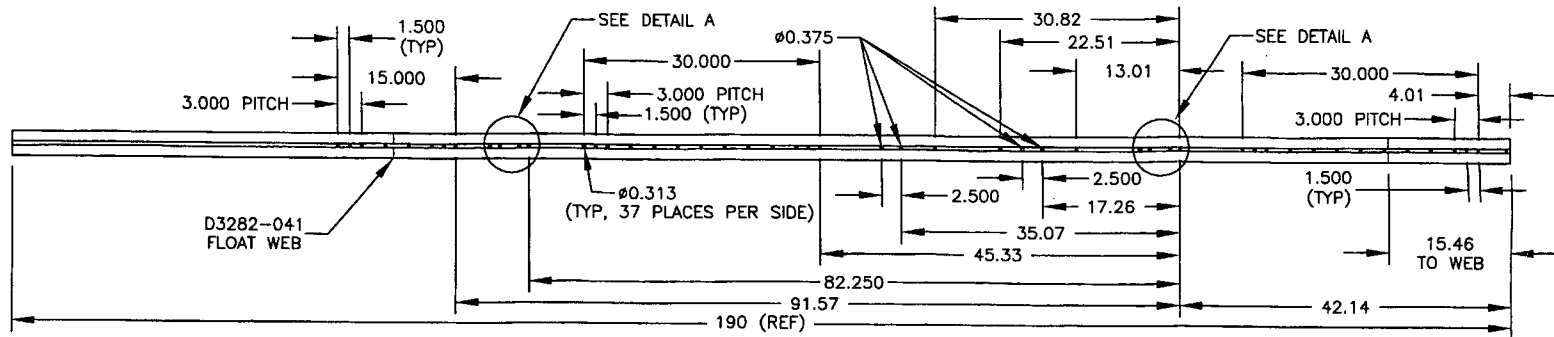
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

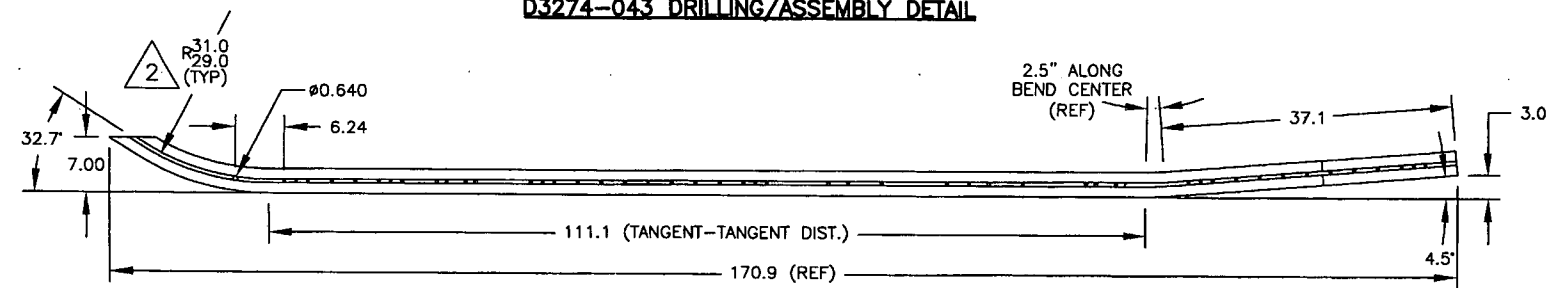
NOTE: Date & initial all entries

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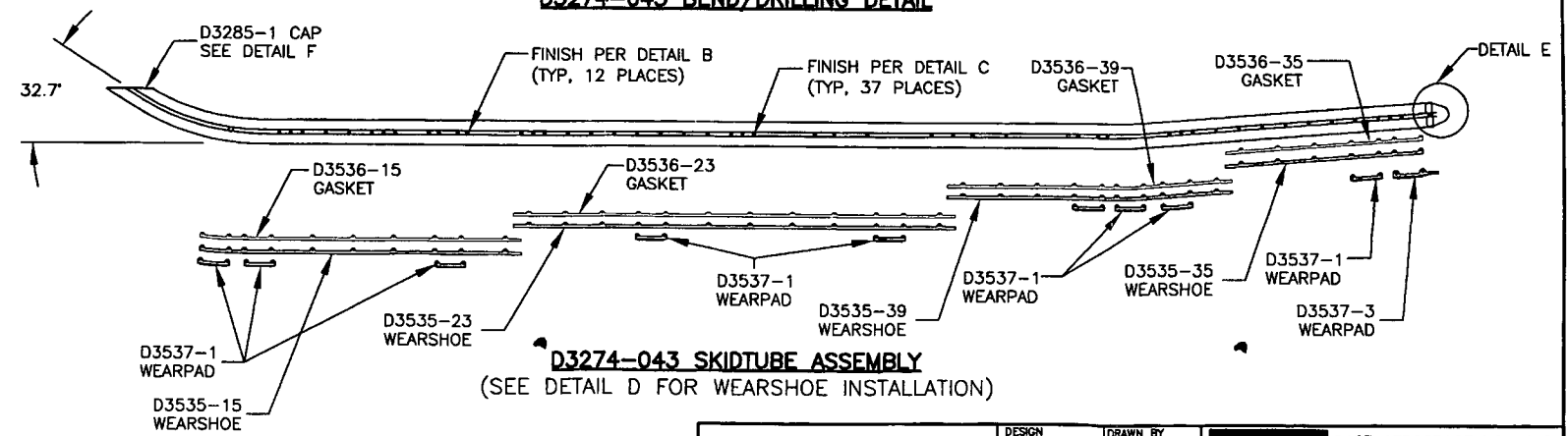
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY		REV. D SHEET 3 OF 4 SCALE 1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

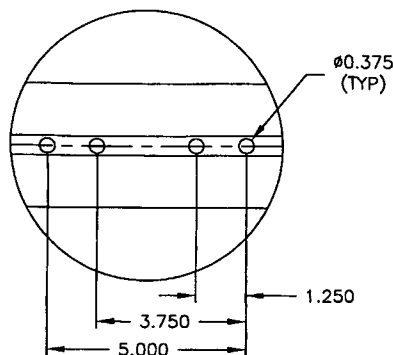
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

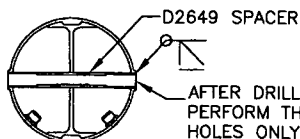
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

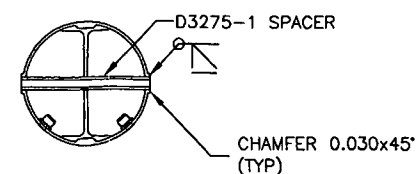


DETAIL B FOR 0.375 HOLES ONLY

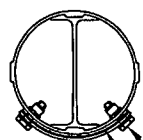


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY



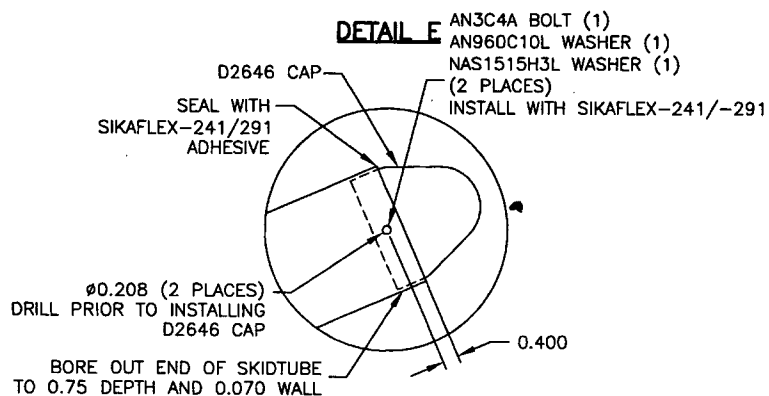
DETAIL D



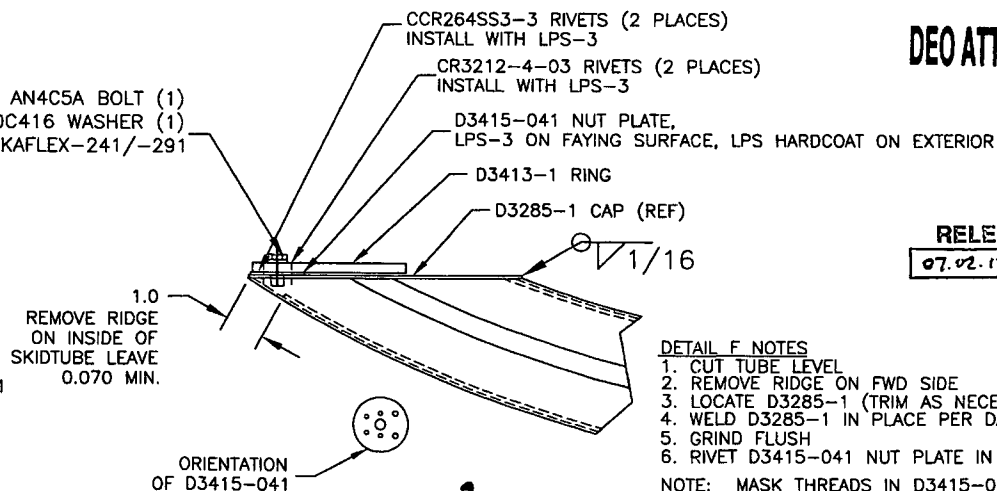
- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E



DETAIL F: END FINISHING DETAIL



DEO ATTACHED

RELEASED
07.02.12

DETAIL F NOTES

1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	H	APPROVED	H	DRAWING NO. D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D SHEET 4 OF 4 SCALE 1:3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

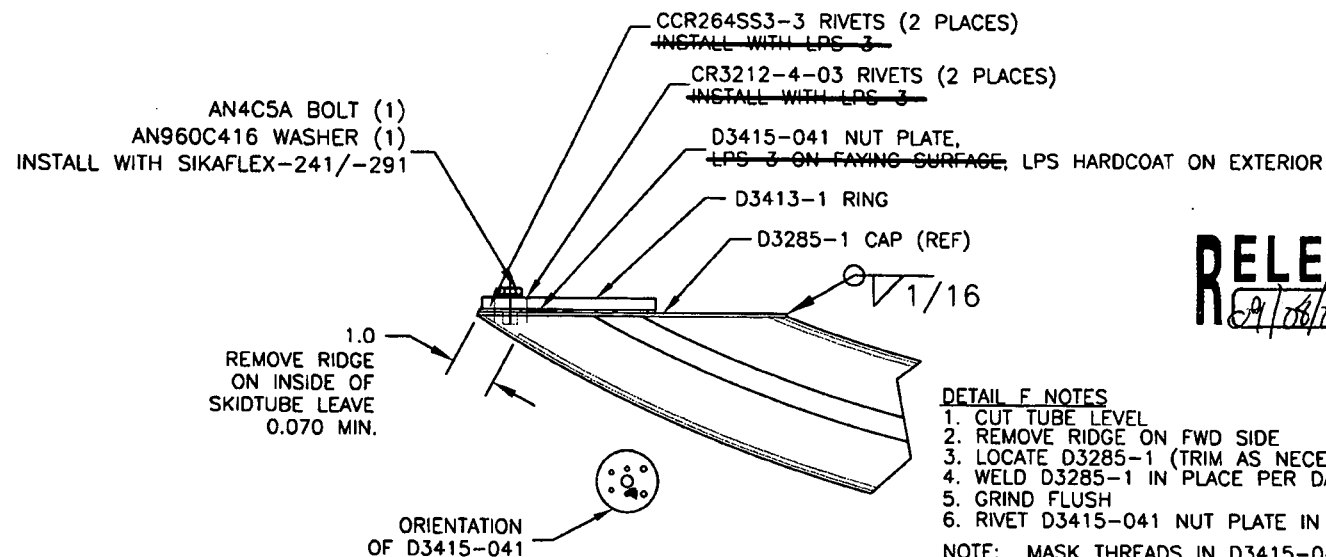
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS-3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 235

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berley Elliott
Job number: 59780
Part number: D200-642-541
Description: 200 skid tube
Welding Process: Tig ☒ Mig ☐
Base material: Aluminium
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual:
Penetration:

pass ☒ fail ☐
pass ☒ fail ☐

UNACCEPTABLE

Cracks:
Undercut:
Pin holes:
Overlap (cold lap)
Porosity (surface):
Coloration:

pass ☒ fail ☐
pass ☒ fail ☐
pass ☒ fail ☐
pass ☒ fail ☐
pass ☒ fail ☐
pass ☒ fail ☐

Qualifier P. A. W.

Date of Test Coupon 10.07.01

Welder Berley Elliott

Date of Test Coupon 10-07-01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld